

REMARKS

The Office Action dated January 14, 2003 has been received and carefully noted. The above amendments to the claims, and the following remarks are submitted as a full and complete response thereto. Claim 2 is amended. No new matter is presented. In view of the above amendments and the following remarks, Applicants request the favorable consideration of claims 2 and 3.

Applicants also thank the Examiner for the interview conducted on January 9, 2003 with the Applicants' representative.

Claims 2 and 3 are rejected under 35 U.S.C § 102(b) as being anticipated by or in the alternative under 35 U.S.C. 103(a) as being obvious over Kampe et al. (U.S. Patent No. 4, 602, 426). The Office Action takes the position that Kampe teaches or suggests all the features of claims 2 and 3. It is respectfully submitted that claims 2 and 3 recite subject matter that is neither taught nor suggested by the applied prior art. Accordingly, Applicants request the favorable consideration of the claims 2 and 3.

Claim 2 is directed to an electrode for an electric double-layer capacitor having a single layer, an active material and a conductive material and which is bonded to a current collector. The concentration of the conductive material in a surface portion of the electrode bonded to the current collector is higher than the concentration of a conductive material in an internal portion of the electrode.

Kampe is directed to a method of producing a gas diffusion electrode. Kampe also discloses a gas diffusion electrode comprising a electrically conductive current collector, an electrochemical active material, a wet-proofing agent and a pore forming agent. Kampe further discloses that various electrically conductive materials may be used. Further, Kampe discloses that the collector is contiguously associated with at least one active mixture layer. However, Kampe does not teach or suggest an electrode for an electric double-layer capacitor having a single layer comprising an active material and a conductive material. Kampe discloses multiple layers. For instance, Kampe discloses that the active and wet proofing power mixtures are applied in layers to the electrically conductive current collector. In addition, Kampe teaches that the order of layers after application is important and that the mixture layers should be applied such that the active mixture layers are all present on one side of the wet proofing mixture layer and arranged in layers of

progressively increasing weight (See Column 4, Lines 6-14). In contrast, the claimed invention, recites an electrode for electric double-layer capacitor having a single layer comprising an active material and a conductive material. Thus, since Kampe discloses that it is important to have multiple layers, it is submitted that Kampe neither teaches nor suggests all the features of the claimed invention. Accordingly, Applicants request the withdrawal of the rejection of claim 2 under 35 U.S.C. 102(b) and 103(a).

Claim 3 depends on claim 2 and for at least the reasons mentioned above, it is respectfully submitted that claim 3 likewise recites subject matter that is neither taught nor suggested by the applied prior art. As a result, Applicants request the withdrawal of the rejection of claim 3.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (U.S. Patent No. 5, 450,279) in view of Kampe et al (U.S. Patent No. 4,602,426). The Office Action takes the position that the combination of Yoshida and Kampe teach or suggest all the features recited in claims 2 and 3. It is respectfully submitted that the claims 2 and 3 recite subject matter that is neither taught nor suggested by the applied prior art.

Yoshida is directed to an electric double layer capacitor. Yoshida discloses the use of activated carbon in a powder or a fiber state for bonding the combined body to the current collectors. However Yoshida, as admitted by the Office Action, does not disclose the gradient composition of the conductive layer. In addition, Yoshida does not teach or suggest an electrode for an electric double-layer capacitor having a single layer comprising an active material and a conductive material which is bonded to a current collector, wherein the concentration of the conductive material in a surface portion of the electrode bonded to the current collector is higher than the concentration of a conductive material in an internal portion of the electrode.

It is respectfully submitted that Kampe does not cure the deficiencies of Yoshida. Specifically, Kampe also does not teach or suggest an electrode for an electric double-layer capacitor having a single layer comprising an active material and a conductive material. Therefore the combination of the references do not teach or suggest the features of the claimed invention. As mentioned above, although Kampe discloses a composition gradient that is present through the thickness of the electrode, Kampe does not teach or

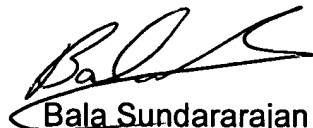
suggest that the concentration of the conductive material in a surface portion of the electrode bonded to the current collector is higher than the concentration of a conductive material in an internal portion of the electrode. Furthermore, it is submitted that it is not obvious to combine these references since the references relate to non-analogous art. In particular, Kampe is directed to primary batteries rather than electric double layer capacitors. Therefore, it is submitted that the combination applied references neither teach or suggest all the features recited in claims 2 and 3. Accordingly, Applicants respectfully request the withdrawal of the rejection of claims 2 and 3.

In view of the distinctions discussed above, withdrawal of the rejections to claims 2 and 3 is respectfully requested. Applicants submit that claims 2 and 3 recite subject matter that is clearly patentable. Therefore, Applicants submit that the application is now in condition for allowance with claims 2 and 3 contained therein. Should the Examiner believe the application is not in condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to Counsel's Deposit Account 01-2300.

Respectfully submitted,

Arent Fox Kintner Plotkin & Kahn



Bala Sundararajan
Attorney for Applicant
Reg. No. 50,900

Customer No. 004372
1050 Connecticut Ave. NW
Suite 400
Washington, D.C. 20036-5339
Tel: (202) 857-6261
Fax: (202) 638-4810
BKS/bgk